This report will uncover the challenges facing construction firms today, and the ways they improve operational efficiency and financial discipline through cloud-based solutions.
Today’s construction industry is filled with uncertainty. Regardless of the type and size of a construction project, firms are at risk of increased costs, restrictive regulatory oversight, and difficult relationships with suppliers and subcontractors. These risks can originate on-site, or through back office functions such as finance. Thus, it becomes incredibly difficult for leading construction firms to make holistic decisions enabling the delivery of projects on-time, and under budget.

To combat these challenges, top performing construction firms leverage cloud-based project portfolio management solutions that provide real-time visibility into project data along with essential financial information. As a result, these organizations can more effectively manage project timelines and costs; share information with subcontractors, suppliers, and customers; and ensure payments are made within policy and process standard compliance. This report will uncover the challenges facing construction firms today, and the ways they improve operational efficiency and financial discipline through cloud-based solutions.

**Risk Dominates the Construction Industry**

A recent survey of architecture, engineering, and construction firms (AEC) uncovered the challenges that those firms face in today’s business environment (Figure 1). These challenges boil down to a lack of visibility, increased costs, and elevated risk.
Managing Financial Risk in Construction Projects through Cloud Technology: Keep Costs Low and Improve Profits

Due to a lack of visibility, construction firms cannot effectively manage resources, guide projects towards completion, monitor costs, or predict profitability. Many construction firms simply don’t have easy access to the information they need to make effective decisions.

In an environment hindered by increased regulatory and financial risk, margins may shrink or vanish, compliance issues can rear their ugly head, and the impact of poor decisions can be amplified. Today’s construction firms must take a holistic approach to avoiding risk and improving decision-making.

These organizations are also significantly challenged in their ability to deliver individual projects on-time and under budget (Figure 2). Specifically, these challenges stem from insufficient project reporting, making it difficult for construction firms to allocate resources, keep a keen eye on costs, and communicate with customers, suppliers, and subcontractors.
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Figure 2: Top Project-Specific Challenges

With resources in short supply, construction firms must do all they can to ensure that they are getting the most value out of the people and materials available to them. But without insight into the demand or availability for these resources, it is extremely difficult to manage costs effectively.

When construction firms are attempting to manage costs with insufficient reporting, it can be difficult to determine profitability while managing a project and avoiding scope creep to stay within budget.

Lastly, insufficient reporting can significantly hinder external communication. Ensuring that customer expectations are met, and that materials from suppliers arrive on-time and at the right cost, are not easy tasks. Further, subcontractors play a crucial role and must be managed effectively. Not to mention there are compliance issues related to reporting standards, as well as regulatory demands related to materials, workers and processes.

To avoid these challenges, construction firms must improve their current capabilities to support increased visibility, execution, and communication.
Solutions for Improved Construction Management

Clearly, construction firms are challenged with increased financial risk, ineffective and inadequate internal and external communication, and lack of insight into essential project information such as timelines, costs, and resources. To minimize these challenges, leading construction firms are more likely to have implemented a variety of technology enablers (Table 1). For example, to manage financial risk, Leaders have implemented solutions such as project costing, forecasting applications, expense management, and contract management. Leaders also have access to solutions for procurement and subcontractor management, which helps to improve communication, compliance, and financial management. There are also solutions that ensure the right resources are utilized effectively, minimizing costs through more effective project portfolio management.

Table 1: Leaders Implement Technology for Managing Costs Across the Project Portfolio

<table>
<thead>
<tr>
<th>Technology</th>
<th>Leaders</th>
<th>Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Costing</td>
<td>89%</td>
<td>64%</td>
</tr>
<tr>
<td>Document Management</td>
<td>74%</td>
<td>60%</td>
</tr>
<tr>
<td>Budgeting and Forecasting Applications</td>
<td>71%</td>
<td>46%</td>
</tr>
<tr>
<td>Quoting and Estimating</td>
<td>70%</td>
<td>41%</td>
</tr>
<tr>
<td>Procurement</td>
<td>70%</td>
<td>38%</td>
</tr>
<tr>
<td>Time Tracking Against Projects</td>
<td>68%</td>
<td>51%</td>
</tr>
<tr>
<td>Expense Tracking Against Projects</td>
<td>64%</td>
<td>57%</td>
</tr>
<tr>
<td>Resource/ Workforce Scheduling</td>
<td>63%</td>
<td>47%</td>
</tr>
<tr>
<td>Contract Management</td>
<td>59%</td>
<td>45%</td>
</tr>
</tbody>
</table>
Managing Financial Risk in Construction Projects through Cloud Technology: Keep Costs Low and Improve Profits

By combining this functionality under one roof, construction firms can benefit from a more holistic view of essential project and financial information, facilitating more informed, agile decision-making.

Project Portfolio Management (PPM) solutions (Figure 3) are designed to provide all necessary project information across the entire portfolio, enabling better project execution. In fact, leading construction firms are five times as likely to have this technology deployed in the Cloud. This provides the unique ability to access the solution, as long as internet access is available. Therefore, data can be accessed remotely, both internally or externally (i.e., subcontractors and customers), for improved communication.

Through these solutions, construction firms gain access to capabilities that will help them execute projects, minimize risks, and increase profitability.

Source: Aberdeen Group, October 2016

<table>
<thead>
<tr>
<th>Change Management</th>
<th>52%</th>
<th>43%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subcontractor Management</td>
<td>52%</td>
<td>41%</td>
</tr>
</tbody>
</table>

Figure 3: Leaders Implement PPM in the Cloud

Source: Aberdeen Group, October 2016
Capabilities for Containing Risk in Construction

Risk mitigation is a primary goal in the delivery of profitable construction projects. This is best accomplished by providing visibility into essential project data, and making relevant decisions on an on-going basis. Fortunately, cloud project management solutions greatly improve access to important project data (Figure 4).

Figure 4: A Central Repository for Project Management

Those with cloud project management solutions are 58 percent more likely to have all project information captured in a central repository. This means that project managers, and other employees, will have on-demand access to all relevant data. This will help with resource allocation and utilization as well as managing schedules and deadlines. In an environment filled with risk, easy access to project information will enable decision-makers to act immediately in response to adverse events as they attempt to prevent additional costs and maintain previously defined schedules.
Those organizations with cloud solutions also are 70 percent more likely to have real-time access to project information, across the entire organization, further enhancing project execution. In addition, financial risk is the paramount threat to project profitability. Through cloud project management solutions, firms can gain greater visibility and insight into financial data, as well as implement standards that enforce financial discipline and compliance (Figure 5).

![Figure 5: Avoiding Risk, Managing Costs, Maintaining Compliance](image)

Through cloud software, construction firms can ensure that accurate, timely, and relevant financial data is easily available to stakeholders. This transparency must also extend externally to customers, suppliers, and subcontractors. As a result, those with cloud solutions are over twice as likely to provide real-time visibility into project data for partners, customers, and suppliers. For example, this could mean insight into the timing of payments. They can connect this information to project data to manage costs, due to change orders.

Much of the financial information contained within these solutions is also necessary for financial reporting and maintaining
compliance. Fortunately, those with cloud solutions are 2.4 times as likely to have automated financial and regulatory reporting.

To understand how cloud project management solutions can help construction firms manage financial risk, examine the impact of these solutions on the payment process. We can see from Figure 6 that those with cloud solutions are 98 percent more likely to have electronic payment workflows. Consequently, there is more efficiency and visibility in payment processes. These processes will become centralized, and users can more effectively match invoices to contracts, fix errors, and react to automated reminders. There is more visibility into how payments are being made, external communication is enhanced, and regulatory and compliance standards can be enforced, reducing financial risk. For example, construction firms can gain broad visibility into the status of lien waivers, helping to ensure that payments are made appropriately and to manage a critical risk. By automating these processes, construction firms can better manage costs and exposures as they attempt to deliver profitable projects.

**Figure 6: Cost and Compliance Management through Improved Supplier and Contractor Collaboration**
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The Results

Tellingly, organizations that have implemented a cloud project management solution perform better in a variety of Key Performance Indicators (KPIs) than organizations that have implemented only on-premise solutions (Table 2). Organizations using cloud solutions saw a 9 percent greater improvement in time-to-decision over the past year. This shows that they can make more agile decisions based on more relevant data. But what is ultimately most important, is that organizations with cloud project management solutions deliver more projects within budget and on-time while seeing greater increases in profitability than their competitors with on-premise solutions. These improvements indicate that those with cloud solutions can more effectively manage costs and risks to ensure that construction projects meet profitability goals in this volatile environment.

Table 2: Cloud PPM Improves Project Profitability

<table>
<thead>
<tr>
<th>Average Performance</th>
<th>Cloud Project Management</th>
<th>No Cloud Project Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement in time-to-decision over the past year</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Percentage of employees that exceed performance metrics</td>
<td>59%</td>
<td>36%</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>78%</td>
<td>70%</td>
</tr>
<tr>
<td>Projects delivered on-time or early</td>
<td>73%</td>
<td>72%</td>
</tr>
<tr>
<td>Projects delivered under budget</td>
<td>80%</td>
<td>79%</td>
</tr>
<tr>
<td>Improvement in profitability over the past year</td>
<td>10%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: Aberdeen Group, October 2016
Key Takeaways and Recommendations

Top performer construction firms can rely on comprehensive cloud project management solutions to improve their visibility into all essential data. These solutions will aid in decision-making, as well as improving agility and execution. Through these solutions, construction firms should focus on the following three crucial tenets for success:

- **Improve operational efficiency.** Through cloud solutions, construction firms can provide visibility to all project information on an ongoing basis. This gives project leaders the insight they need to utilize resources effectively, manage project timelines, and communicate with customers, suppliers, and subcontractors. This approach to project management will help to reduce costs and improve margins.

- **Manage risk effectively.** Construction firms must be proactive in identifying sources of risk and creating contingency plans to mitigate those risks. Increased communication with the extended enterprise and utilizing analytic tools will help to improve confidence of business leaders when making decisions.

- **Support financial discipline.** Through the automation of financial processes, construction firms can enforce policy and regulatory standards, keep costs in check, and improve transparency.

Cloud project management solutions will help your construction firm build a foundation for success.
Managing Financial Risk in Construction Projects through Cloud Technology: Keep Costs Low and Improve Profits

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Related Research

Cloud Project Management: Connecting Teams for Improved Project ROI; September 2013
Managing the Project Portfolio to Improve Profits; December 2014
Why Your Organization Can’t Afford to Ignore Time Tracking and Resource Scheduling; October 2013
Social Project Management: The Whole is Stronger than its Parts; October 2013

Author: Nick Castellina, Vice President and Research Group Director, Business Planning and Execution

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